09/325,189

WEST

Freeform Search

Database: US Patents Full-Text Database; US Pre-Grant Publication Full-Text Database; JPO Abstracts Database; EPO Abstracts Database; Derwent World Patents Index; IBM Technical Disclosure Bulletins

Term: l3 and (low concentration near5 primer$1 near5 labeled)

Display: 10 **Documents in Display Format:** - **Starting with Number** 1

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Search History

DATE: Tuesday, July 30, 2002 Printable Copy Create Case

Set Name side by side	Query	Hit Count	Set Name result set
DB=USPT,JPAB,EPAB,DWPI; PLUR=YES; OP=ADJ			
L7	l3 and (low concentration near5 primer$1 near5 labeled)	1	L7
L6	L5 and low concentration$1	20	L6
L5	l3 and (primer$1 near5 label$2)	79	L5
L4	L3 and ((low or small or minor) near5 primer$1 near5 label$2)	3	L4
L3	asymmetr$2 near5 amplif$	528	L3
L2	L1 and (low or minor)	8	L2
L1	asymmetr$2 near5 amplif$ near5 label$	11	L1

END OF SEARCH HISTORY

Generate Collection

L2: Entry 7 of 8 File: USPT

DOCUMENT-IDENTIFIER: US 5567583 A
TITLE: Methods for reducing non-specific priming in DNA detection

Brief Summary Text (2):
Recent development of the polymerase chain reaction ("PCR") has provided an important tool for the detection of nucleic acid sequences present at low concentrations (Mullis, K. B. et al., U.S. Pat. Nos. 4,683,195 and 4,683,202). In PCR, a target sequence having boundaries defined by two oligonucleotide extension primers, is amplified through repeated enzymatic cycles to provide additional templates for further amplification reactions. Accordingly, a small number of target sequences can be exponentially amplified and readily detected.

Brief Summary Text (3):
A major limitation of PCR lies in the extensive generation of by-products produced as a result of non-specific priming events, e.g., random priming of the nucleic acid template and/or self priming of the extension primers. Thus, when a high number of amplification cycles are required to amplify a target sequence present at a relatively low concentration, the products of non-specific priming events significantly impede PCR sensitivity.

Detailed Description Text (18):
Unlike a universal detection duplex, a "specific detection duplex" is ready for use in the amplification/detection of a target nucleic acid. See FIG. 1. The solid circle and solid square stand for two fluorophores and the hollow circle stands for an incapacitated 3' end of the blocking oligonucleotide. Note that in the embodiment shown in FIG. 1, the labeled primer contains a segment noncontiguous to its priming sequence. Further, a pre-asymmetric amplification, which preferentially amplifies the strand to which the labeled primer binds, is conducted to enhance both the sensitivity and selectivity. An asymmetric reaction can be induced by providing unequal amounts of the primers, i.e., an excessive one and a limiting one, or by providing primers of unequal lengths in complementarity to the specific priming sequence. Other factors may also contribute to the asymmetric nature of amplification, such as the difference in rate for the synthesis of each template strand. The optimal primer ratio for asymmetric amplification is a factor to be determined empirically. See Shyamala et al., 1989, J. Bacteriol. 171:1602, hereby incorporated by reference.